



DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
2300 E STREET NW
WASHINGTON DC 20372-5300

IN REPLY REFER TO

BUMEDINST 6200.14
BUMED-24
6 Jul 94

BUMED INSTRUCTION 6200.14

From: Chief Bureau of Medicine and Surgery
To: Ships and Stations Having Medical Department Personnel

Subj: PEDIATRIC LEAD POISONING PREVENTION (PLPP) SCREENING PLAN

Ref: (a) Centers for Disease Control, Preventing Lead Poisoning in Young Children, October, 1991 (NOTAL)
(b) Assistant Secretary of Defense (ASD)/Health Affairs and ASD/Production and Logistics memo of 24 Nov 92 (NOTAL)
(c) COMNAVFACENGCOM ltr 11101 FAC 08T/1822B of 9 Nov 92
Subj: Navy Family Housing Lead Based Paint/Asbestos Inventory Program (NOTAL)

Encl: (1) Medical Screening Program
(2) Algorithm for Information and Action Progression

1. Purpose. To provide guidance on medical screening to prevent lead poisoning to all Navy-sponsored health care facilities who evaluate and treat children.

2. Background

a. Lead poisoning was designated as the Nation's number one preventable childhood illness by the Department of Health and Human Services in 1991. New data indicate significant adverse effects of lead exposure in children at blood lead levels previously believed to be safe. The Centers for Disease Control (CDC) intervention level was therefore revised downwards to 10 micrograms per deciliter ($\mu\text{g}/\text{dl}$) in reference (a).

b. Although the effects of low-level lead exposure may not seem severe in the individual child, on a population basis elevated blood levels are extremely important. The goals of the Navy's lead poisoning prevention program are to ensure that no child has a significantly elevated blood lead level and to identify and control potential environmental sources of exposure. In compliance with reference (b), early identification of a child with an elevated blood lead level shall initiate an investigation of the sources of lead exposure in the child's environment. Discovery of sources of lead exposure shall initiate lead hazard abatement procedures, and other interventions designed to prevent the sequelae associated with long-term exposure. Primary prevention efforts emphasizing the elimination of lead hazards



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before children are poisoned are being implemented concurrent with this instruction by the Commander, Naval Facilities and Engineering Command (COMNAVFACENGCOM), per reference (c).

3. Implementing the PLPP Program

a. Implementing the PLPP program Navy-wide is discussed in enclosure (1). The Navy PLPP program is based on the recommendations for medical screening and preventive measures outlined in reference (b).

b. A PLPP working group must be established at each locality. Group members should come from the commands involved, including health care professionals providing prenatal and child care to Navy beneficiaries, representatives from commands responsible for maintaining military housing and facilities, and representatives from managed health care systems providing prenatal and child care to Navy beneficiaries. The working group must adapt the program outlined in enclosure (1) to meet the local situation and evaluate or modify the program as needed. Enclosure (2) is an algorithm showing a suggested flow of information and action in implementing the PLPP program. In all situations involving referrals from one command to another, the working group shall determine appropriate follow-up procedures to ascertain recommended courses of action have been taken.

c. Commanding officers must report to the Commanding Officer, Navy Environmental Health Center (NAVENVIRHLTHCEN) (NEHC-32), 2510 Walmer Avenue, Norfolk, VA 23513-2617, the results of all PLPP screening following enclosures (1) and (2).

4. Responsibilities

a. The responsibilities of the COMNAVFACENGCOM, as structured in reference (c), are:

(1) Screening Navy family housing for lead-based paint (LBP), lead dust, and lead in soil.

(2) Assessing the risk to the occupant of any lead found during the screening.

(3) Abating "major risks" to a level at which it is possible to maintain LBP in place.

b. The commanding officers of activities are responsible for maintaining LBP in place and for reviewing the use of LBP in any maintenance or repair work conducted in or around housing units.

c. The commanding officers of medical treatment facilities (MTFs) are responsible for:

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(1) Developing and implementing the local medical aspects of the PLPP program, including the relevant referral systems.

(2) Assisting activities by reviewing plans and specifications for lead abatement projects, to ensure occupational health requirements are fully incorporated.

(3) Coordinating implementation of the PLPP program through the cognizant preventive medicine department. Responsibilities of the preventive medicine department include maintaining liaison with the supported activities to ensure environmental assessments and counseling are performed when indicated, and functioning as the central source for data collection. This instruction does not prohibit MTF commanding officers from designating a local PLPP coordinator outside the preventive medicine department, if required by local conditions.

(4) Ensuring the laboratory support for the medical screening program participates in a blood lead proficiency testing program and sets criteria for physician notification.

(5) Developing and implementing training programs, which shall include the requirements of the PLPP program, for the following:

(a) Health care providers involved in the prevention, diagnosis, or treatment of pediatric lead poisoning.

(b) Preventive medicine technicians and environmental health officers involved in environmental assessment and parental counseling.

d. The Commanding Officer, NAVENVIRHLTHCEN is responsible for:

(1) Maintaining liaison with COMNAVFACENGCOM and with the MTFs to evaluate and modify the PLPP as needed.

(2) Planning, budgeting, maintaining a central data base, and, when funded, conducting data analyses from information supplied by the MTFs.

(3) Maintaining liaison with COMNAVFACENGCOM to evaluate the results of the COMNAVFACENGCOM alpha plan and evaluate the effectiveness of various abatement techniques.

5. Report. The Blood Lead Level Report required by enclosure (1), paragraph 6, is assigned report control symbol MED 6200-5, and is approved by Chief, Bureau of Medicine and Surgery for 3 years from the date of this instruction.

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7. Form. NAVMED 6200/1 (9-93), Blood Lead Level Report Form, provided in enclosure (1), is approved for local reproduction.


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Stocked:
Navy Aviation Supply Office
ASO Code 103
5801 Tabor Avenue
Philadelphia PA 19120-5099

MEDICAL SCREENING PROGRAM

1. Introduction. To set minimum standards of care in the screening of children for lead poisoning. The screening procedures used are questionnaires and tests for blood lead levels. Reference (a) contains further information on screening and treatment of lead poisoning in children.

2. Questionnaires. Cases for screening with the questionnaire will come from two sources:

a. Child Care Clinics in Navy-Sponsored Health Care Facilities

(1) Pediatric or family practice clinics which provide medical care to children (other than well baby clinics). All children 6 years of age and younger must be screened for lead exposure using a questionnaire that includes as a minimum the items presented in table 1. Additional items may be added to meet local situations.

(2) Well baby and well child clinics. The questionnaire shall be administered first at all 12-month visits (which may be between 8 and 18 months of age), and must be updated annually or sooner based on the history obtained during child care visits. Use of the screening questionnaire may be discontinued at age 7 years.

(3) A child with at least one "yes" answer is classified "high risk" for lead exposure. A child with all "no" answers is classified "low risk." When "don't know" answers cannot be resolved, classification into a risk group will depend on the physician's judgment.

(4) The completed questionnaire must be placed in the child's health record. A copy of the completed questionnaire evaluated as "high risk" must be provided to the cognizant preventive medicine department for appropriate action, and forwarded to NAVENVIRHLTHCEN with the quarterly reports.

b. Facilities and Housing Commands. These commands will assess the risk for LBP hazards in military housing and day-care units, either as a part of the unit inspection per reference (c), or as a result of a request from an MTF, via the cognizant preventive medicine department. Housing units will be considered "military" if the Navy is responsible for risk assessment and abatement of the units. When a surveyed unit is rated as a major LBP risk as defined in reference (c), the occupants of that unit will be provided counseling and a referral for medical evaluation. The mechanism for providing counseling and referrals will be determined by the local working group.

3. Blood Lead Tests

a. Blood lead levels shall be obtained on:

(1) Children at the time of the 12-month well child visit. This requirement may be phased in over a 5-year period depending on availability of staffing and resources. A minimum of 20 percent must have blood lead levels drawn the first program year, adding 20 percent each year thereafter.

(2) All children considered high risk per information obtained from the questionnaire, or clinical evaluation, or referred by facilities and housing commands.

(3) Those children indicated for clinical reasons.

b. Blood lead must be determined using either venous or capillary blood. The type of specimen used is dictated by the capabilities of the laboratory support. If capillary (finger stick) samples are used, they must be drawn by personnel trained in the collection method outlined in appendix I of reference (a). Venous samples have a low likelihood of contamination by environmental lead compared to capillary samples. Elevated capillary blood lead levels must be confirmed using venous blood according to the timetable in table 2.

c. The MTF shall develop procedures to ensure that all blood lead test results are provided to the clinic that ordered the test, with copy to the preventive medicine department.

4. Evaluation and Management

a. Table 3 contains guidelines for medical management based on elevated venous blood lead levels per reference (a).

b. The facilities and housing commands will develop and implement a prevention plan focusing on major risk housing units, including LBP management-in-place and abatement per reference (c).

c. A local system of tracking referrals must be developed by the departments and commands involved in the PLPP program. An algorithm showing a suggested flow of information and action is included as enclosure (2). The cognizant preventive medicine department should coordinate local activities.

(1) COMNAVFACENGCOM will provide the preventive medicine department with a list of all housing units rated as major LBP risk, as defined in reference (c).

(2) If the child care clinics have no information on the lead surveys of the relevant housing or day-care units, they must refer to the preventive medicine department all cases determined to be high-risk by questionnaire, all cases with suspected lead toxicity, and all cases with blood lead levels above 19 $\mu\text{g}/\text{dl}$ (Class III through Class V, as defined in table 3). The preventive medicine department must refer these cases for environmental risk assessment to the appropriate agency as discussed below. Other cases may be referred for environmental risk assessment, based on the physician's clinical judgment.

(a) Referrals for environmental risk assessment must be made to facilities and housing commands if the child lives in military housing or attends a military day-care facility.

(b) It is recommended that the local working group and the public health department develop a plan that addresses environmental risk assessment and abatement in housing rented to Navy families.

(c) Families who own their homes must be counseled on local nonmilitary resources.

(3) When a child who lives in a military housing unit has undergone chelation therapy, and environmental assessment reveals the source of lead poisoning was largely a factor of the dwelling, the family must be moved to an alternate unit at Navy expense until abatement is completed as required by reference (b). Pregnant women and other children may be moved to alternate units at Navy expense based on the recommendation of the obstetrician or the child's physician.

(4) All cases must be referred to the preventive medicine department for evaluation. The preventive medicine department, with technical support from the industrial hygiene department, will obtain a history to assess possible sources of lead exposure (glazed pottery, hobbies, occupations, etc.), perform appropriate environmental sampling, forward the samples to the appropriate laboratory, and counsel the parents on the results of the evaluation, including environmental sampling test results.

5. Counseling

a. Counseling or information handouts must be provided to parents by health care providers as part of the anticipatory guidance at every well child and prenatal clinic visit, at other clinics where children are identified a "high risk" by positive response to the questionnaire, and by the preventive medicine department as part of the environmental evaluation requested by the child's physician. Counseling for cases with blood lead levels above 9 $\mu\text{g}/\text{dl}$ must include attention to nutrition, housekeeping interventions, and other sources or pathways of exposure.

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b. The facilities and housing command will provide the occupants of the unit tested, as well as occupants of units expected to have similar LBP hazards, the following information:

(1) Results of LBP survey data performed per reference (c).

(2) Summary of known health hazards associated with lead exposure, including the importance of medical evaluation and the procedures for making appointments with clinics where this evaluation can be performed. This information must be developed in consultation with the local MTF. The mechanism for providing this counseling will depend on local resources.

c. Information in the form of pamphlets, orientation classes, or special lectures to interested groups must be made available.

6. Reports. The CDC recommends universal screening unless it can be shown the community in which the children live does not have a childhood lead poisoning problem. Accurate reports are essential so that the Navy PLPP program can be evaluated and modified as needed.

a. The preventive medicine department shall be the central source locally for data collection.

(1) The child care clinics must provide information quarterly to the preventive medicine department on the number of children screened, their ages, and blood lead levels, using NAVMED 6200/1, sections A - C.

(2) The child care clinics must complete the evaluations referred from the facilities and housing commands, and forward these (including the results of the blood lead tests) to the preventive medicine department.

b. Facilities and housing commands will provide the following information, as available, to the preventive medicine department:

(1) Results of LBP surveys on housing or day-care units, whether performed as part of the unit survey or in response to a request generated from the child care clinics through the preventive medicine department.

(2) Actions undertaken as a result of LBP surveys.

c. The preventive medicine department shall provide information (following Privacy Act constraints) on the results of blood lead tests to the cognizant facility and housing personnel

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to support the evaluation of housing units performed per reference (c). Use NAVMED 6200/1, section D, to provide this information.

d. The preventive medicine department shall provide information on the results of LBP surveys on housing or day-care units to local military and civilian health care providers.

e. Preventive medicine departments shall forward the information from NAVMED 6200/1, Blood Level Reporting Form, quarterly to the NAVENVIRHLTHCEN.

f. Reports required by local, State, or Federal agencies shall be filed by the cognizant naval hospital or facilities and housing command, depending on the type of reports and the procedures agreed on by the local working group.

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Table 1

LEAD EXPOSURE RISK ASSESSMENT QUESTIONNAIRE

Child's Name: _____ Date of Birth _____
 Sponsor's Social Security Number: _____
 Address: _____

Is this address military or civilian housing? Yes No (Circle one.)
 If yes, specify housing area or subdivision: _____

These questions must be completed at each child care clinic visit.

Does your child: (Circle one answer for each question.)

- | | | | |
|---|-----|----|------------|
| 1. Live in or regularly visit a house, day-care center, or preschool that was built before 1980 which has peeling or chipping paint, or is undergoing renovation or remodeling? | Yes | No | Don't Know |
| 2. Have a brother, sister, housemate, or playmate with a history of lead poisoning or a confirmed high blood lead level? | Yes | No | Don't Know |
| 3. Live with an adult whose job or hobby ¹ involves exposure to lead? | Yes | No | Don't Know |
| 4. Live near an active lead smelter, battery recycling plant, or any industry you know that releases lead? | Yes | No | Don't Know |
| 5. Live in or regularly visit a house, day-care unit, or preschool that was identified by a Department of Defense inspection team ² as major risk for lead? | Yes | No | Don't Know |

Completed by: _____ Date: _____
 Reviewed by: _____ Date: _____
 Medical Treatment Facility _____

Blood lead level³ _____

¹ Examples: Reloads ammunition, makes fishing weights, makes ceramics, makes stained glass, works at a firing range, works with industrial or shipboard paint removal, works with electrical or torch soldering, makes soft metal castings.

² The child will be provided with a referral note indicating exposure to lead as discussed in enclosure (1), paragraph 2b. When the blood lead test result is received, enter the blood lead level on the referral note and forward to the preventive medicine department.

³ If child is "high risk," forward copy of this form with blood lead level result to the preventive medicine department.

Table 2

INDICATIONS FOR OBTAINING CONFIRMATORY VENOUS
BLOOD LEAD MEASUREMENTS

Capillary Blood Lead *($\mu\text{g}/\text{dl}$)	Time Within Which Venous Blood Lead Level Must Be Obtained
** < 10	Not applicable
10-19	Within 1 month
20-44	Within 1 week
45-69	Within 48 hours
*** \geq 70	Immediately

* $\mu\text{g}/\text{dL}$ = Micrograms per deciliter.
** < = Less than.
*** \geq = Greater than or equal to.

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Table 3

CLASSIFICATION AND RECOMMENDED ACTIONS
BASED ON CONFIRMED VENOUS BLOOD LEAD MEASUREMENT

Class	Blood Lead Level ($\mu\text{g}/\text{dl}$)	Management
I	< 10	Low risk: ¹ No specific followup.
		High risk: ¹ Consider rescreen in 6 months.
II	10-19	Reassess risk factors for exposure.
		Provide education concerning diet and personal hygiene.
		If levels persist, initiate individual case management, environmental investigation, and lead hazard abatement. ²
		Rescreen every 3 months. ³
III	20-44	Complete medical evaluation.
		Thorough environmental assessment with remediation. ²
		Rescreen as indicated by treatment plan.
IV	45-69	Begin expeditious medical treatment.
		Lab must notify responsible physician immediately.
		Thorough and expeditious environmental assessment with remediation. ²
V	≥ 70	Initiate medical treatment immediately.
		Lab must notify responsible physician immediately.
		Thorough and expeditious environmental assessment with remediation. ²

¹ "Risk" is assessed via clinical judgment and the information provided by the screening questionnaire (table 1).

² Screen siblings under age 7 years.

³ If three consecutive measurements are 10-19 $\mu\text{g}/\text{dl}$, increase interval of measurements to every 6 months.

Blood Lead Level Reporting Form

Child Care Clinic

MED 6200-5

Medical Treatment Facility	Year			
		1st Quarter		2nd Quarter
		3rd Quarter		4th Quarter

NOTE: In all sections, if the child turns either 2, 4, or 6 years old on the day of testing, the child is counted in the older category; i.e., a child turning 2 on the day of testing is counted in the 2-3 category; a child 3 years, 8 months old is counted in the 2-3 category.

Section A - Blood Lead Levels of High Risk Children (Risk determined from questionnaire or clinical evaluation.)

Total number of children given screening questionnaire:

Number of children determined to be "high risk:"

Blood Lead Level (µg/dl)							
Type of Housing	Age (Years)	< 10	10-19	20-44	45-69	≥ 70	
Military	<2						
	2-3						
	4-5						
	≥ 6						
Nonmilitary	<2						
	2-3						
	4-5						
	≥ 6						
Total							

Note 1. Enter in the appropriate box the number of children in that age group whose blood lead values fall in that range, e.g., if there are five children less than 2 years of age whose blood lead level is less than 10 (µg/dl), write 5 in the box where <2 years (age) and < 10 (blood lead level) intersect.

Section B - Blood Lead Levels of Low Risk Children (Same matrix as for high risk children.)

Blood Lead Level (µg/dl)							
Type of Housing	Age (Years)	< 10	10-19	20-44	45-69	≥ 70	
Military	<2						
	2-3						
	4-5						
	≥ 6						
Nonmilitary	<2						
	2-3						
	4-5						
	≥ 6						
Total							

Section C - Summary Results of Lead Exposure Assessment Questionnaire

1. Total number of questionnaires completed:

2. Number of children identified as "high risk" by questionnaire:

3. Number of "high risk" children by blood level ($\mu\text{g}/\text{dl}$)

Class I (<10)

Class II (10-19)

Class III (20-44)

Class IV (45-69)

Class V (>70)

Section D - Children Referred by Facilities and Housing

Medical Treatment Facility

Housing Development

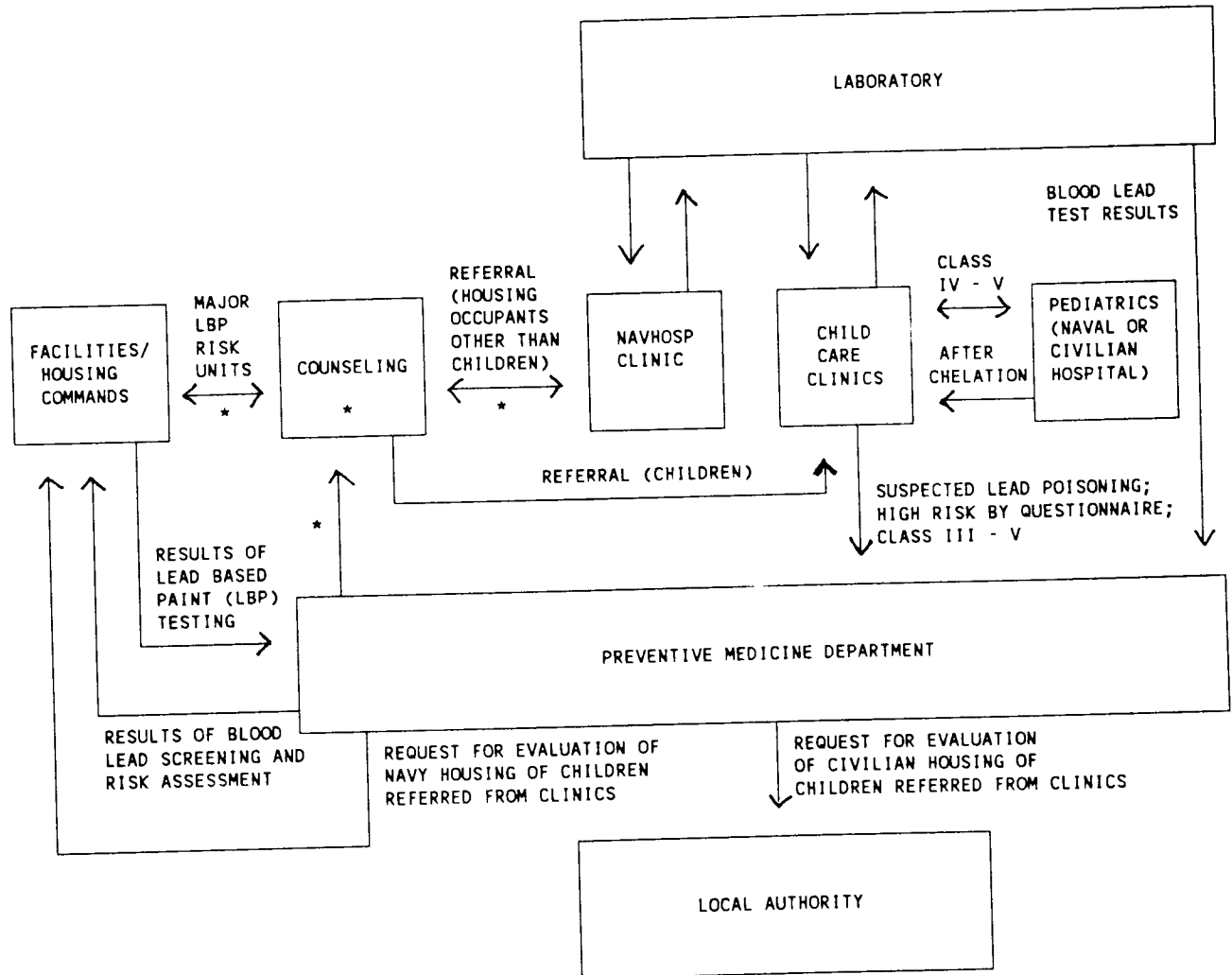
Blood Lead Level ($\mu\text{g}/\text{dl}$)

	Age (Years)	<10	10-19	20-44	45-69	≥ 70	
	<2						
	2-3						
	4-5						
	<u>>6</u>						
	Total						

Note 1. Enter in the appropriate box the number of children in that age group whose blood lead values fall in that range, e.g., if there are five children less than 2 years of age whose blood lead level is less than 10 ($\mu\text{g}/\text{dl}$), write 5 in the box where <2 years (age) and <10 (blood lead level) intersect.

Note 2. Submit one form for each housing development.

ALGORITHM FOR INFORMATION AND ACTION PROGRESSION



* To be determined by the local working group.